

D-24

Personal Computer Data Input for Nuclear Regulatory Commission Licensees

Effective as of
January 1, 2009

A booklet of guidance for data submissions to
NMMSS using electronic formats

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1. INTRODUCTION

1.1. Reporting Guidelines

Refer to the current version of the **NRC Instructions for Completing Nuclear Materials Transaction Reports; NUREG/BR-0006** and **Instructions for Completing Material Balance Report and Physical Inventory Listing NUREG/BR-0007** for specific Nuclear Regulatory Commission (NRC) requirements in reporting data to the NMMSS. These documents specify that data submissions may be made in acceptable electronic forms to the Nuclear Materials Management Safeguards System (NMMSS) and provide the information necessary for completing the source documents (forms) referenced in this directory.

NRC licensees required to report government owned material to NMMSS should refer to the **D-23, Personal Computer Data Input for Department of Energy Contractors** for guidance in the electronic reporting of this material.

1.2. Purpose

This directory provides formatting requirements for the reporting of nuclear material information in electronic file formats to the NMMSS in accordance with the NRC guidelines. A reporting licensee has the option to prepare reported data in an electronic file using the formats presented here using a variety of text editors, XML editors or programmatically in Material Control and Accountability Systems. This data is then saved as a text file and sent to NMMSS via diskette, CD, Zip disk, SIMEX, Direct Link, or electronic mail.

1.3. Acceptable Electronic Formats

The primary formats accepted by NMMSS for electronic data transfer are eXtensible Markup Language (XML) and 80 Column file format files created in the MSDOS or Windows based environments. New technologies are constantly being developed to improve data management. As these methods are tested and analyzed by NMMSS staff, revisions will be made to data input procedures and guidelines. Visit the NMMSS website, www.nmmss.com, for the latest information and guidelines.

A third alternative for submitting electronic data to NMMSS is the use of the Safeguards Management Software (SAMS) for transcribing reported data into a machine readable format. This software is currently available at no charge from NMMSS.

1.3.1. Extensible Markup Language (XML) File Format

The XML format may also be referred to as tagged data as it is based upon the use of tags (words bracketed by '<' and '>') and attributes (of the form name="value"). The NMMSS XML data submission format uses specific tags to establish the limits of units of data. An advantage of using XML is that data is represented by tags which identify the values being reported; however, these tags must be entered exactly as specified or they will not be recognizable to the import programs.

The rules for XML files are strict. The following conditions will cause a failure in an XML data import:

- ❑ **A tag entered incorrectly (For example; using the wrong tag name, inserting spaces, or using improper capitalization).**
- ❑ **A missing tag.**
- ❑ **A missing end tag indicator (designated by the /) for every opening tag.**
- ❑ **A data attribute without surrounding quotes.**

Field sizes of reported data may be adjusted to fit the value, instead of requiring additional spaces to meet the allocated size as seen in the 80 Column file formats. The reported data is entered into double quotes to the right of the attribute tag. Then, the file is saved as a text file using a file extension of **.xml** and submitted to NMMSS.

The use of the following characters inside the double quotes surrounding the value may be forced to be accepted by substituting the following code shown in the table below in place of the character. For example; to report a text comment such as Insert batch id 'Batch6a' in block 24D, the tag value would need to be expressed as "Insert batch id 'Batch6a' in block 24D."

Character	Code
'	'
"	"
&	&
<	<
>	>

Each type of reported data; Inventory, Transaction, and Material Balance, has specific tags as shown in more detail under each section of this document. Data codes, which are necessary to identify the data in the 80 Column file format, are inferred by the XML tag structure and therefore are not required. Refer to the individual data sections for additional details. Additional resources are available about XML online from the following websites:

- ❑ www.w3schools.com
- ❑ www.ucc.ie/xml/

1.3.2. 80 Column File Format

The 80 Column file format is a method for submitting data to NMMSS that directly correlates the columnar position of data in a text file with the related hardcopy data submission forms. In the 80 Column file format the identity of the data is interpreted by its columnar position in the file. For each type of reported data the data is entered according to a precise position within a text file that is then saved and submitted to NMMSS. Each line of data begins with basic identifying information and a data code (sometimes called a record type indicator) that indicates the type of information on the rest of the line. The repetition of the basic identifying information on each line allows the data to be linked with the new information. Allocated spaces for each data field are constant and cannot be adjusted. See the sections in this directory for each specific type of reported data and the precise placement and format of 80 Column file.

1.4. Understanding the Format Presentation

Within each format table presented in this directory the form identifier is listed along with the block identification number or number character combination found on the form. 80 Column file formatting will list the range of columns where the corresponding block of data is to be placed within the text file. XML tables will display the tag identifier (XML attribute) to be used for this block.

The **Type** column defines the form and length of the accepted data. For example, 'Char(1)' indicates that the data will consist of a single character (letter or number) and 'Char(20)' indicates that the data will consist of a combination of 20 characters, letters, and numbers. Generally, character based data fields are set to the left side of the allocated columns in an 80 Column file format; i.e. left justified. 'Date' indicates that the data is a calendar date and will be accepted in a specified format. 'Num(11,2)' indicates the data is restricted to numbers and has an overall length of 11 numbers of which two are to the right of the decimal. Generally, this data is set to the right side of the allocated columns in an 80 Column file format; i.e. right justified. A numeric value can be specified with or without the decimal in the 80-column format. Note that the decimal portion of the number is a part of the number length. For example, if the type is specified as Num(11,2) and the number value to be submitted is the whole number 15; entering 15 into 80 Column will be interpreted as 0.15. The whole number 15 should be entered as 1500 (translates to 15.00). In the XML format, a numeric value must contain a decimal. For example, if the type is specified as Num(12,3) and the number value to be submitted is the whole number 15; enter 15 as 15.00 (translates to 15.000).

The **Essential** column indicates the minimum data submission requirements for successful file import when a '✓' is present in the column. This column does not indicate the necessity of data required by the NRC to be reported; only the requirement for a successful file import into NMMSS.

The **Note** column lists any remarks that will indicate special instructions, such as the format to be used or a value that remains constant. Note that all dates are to be entered in the format MMDDYYYY in 80-column and MM/DD/YYYY in XML formatted file. This means that dates will be reported with their two-digit month indication followed by the two digit day indication and then the four digit year. Note that negative numbers are generally permitted and indicated by the placement of a minus sign (-) to the left of the number. The minus sign (-) in front of the number and a decimal point are apart of the number length (Ex. Num(10,2): -123456.90). Negative Number Conversion characters will no longer be except by the NMMSS. Negative Number Conversion characters were used as the last character of a numeric value, indicated that the numeric value was a negative number and indicated the numeric value of the last character (ex. 20.0N translated to -20.05).

1.5. File Creation

In order to process electronic data without creating reporting errors the data must be created in data files that are free of formatting characters. Tabs are one of the formatting characters that will introduce errors into a file. Always use the space bar to create delineation between data fields. Many text editors such as Microsoft Word or Word Perfect, will add symbols to a file saved by the default method in order to maintain a finished look. This is overcome by saving the file (in any text editor) specifying the SAVE AS option and designating the file as a text

file which removes the formatting characters. This will prevent most extraneous characters from being added to the file. Always review each data file created to verify that no extraneous characters were added. An example of an 80 Column file format inventory data file that has been saved with extraneous formatting characters is shown in Example 1. The correct format using the same data is shown in Example 2.

Example 1; 80 Column data file with extraneous data that creates errors.

Đİ àj± á > pÿ ! # pÿÿÿ ÿÿÿÿÿÿ6 ' " Š L\$ Â J F ¾
6 6 ‡ 0 . 6 y ¾ y 6 Û 101312002AAA 10 861 3329900
20900JNS456-999Y 000 J 000001
101312002AAA 10 861 992300 90020NSJ564-669Y 000 J 000001
101312002AAA E4 864 1600 1488SNS4781341Y 000 J 000003
V - ûû ý 2 0 0 &P 1 F °Đ/
°à=!° "° # \$ %° °Â °Â i 8 @ñÿ 8 Normal CJ D @ D
\$ ¤x @& 5 CJ OJ QJ aJ J @ J Default Paragraph Font
€ 0 € € ÿÿ V V p @ ÿÿ Unk ÿÿÿÿ ÿÿ
G ‡z € ÿ Times New Roman 5
€ Symbol 3& ‡z € ÿ Y 000000J000001 0 - 013-
Normal.dot A- hi d- 1 ll- Microsoft Word 9.0 6@ @ 0\$ Â @ 0\$ Â %
Ô pÿ ŒŒœ. "— +,ù@0 X

Example 2; Same 80 Column data file without the extraneous data that cause errors.

101312002AAA 10 861 3329900 20900JNS456-999Y 000 J 000001
101312002AAA 10 861 992300 90020NSJ564-669Y 000 J 000001
101312002AAA E4 864 1600 1488SNS4781341Y 000 J 000003

A file extension should be assigned which indicates the type of file format used. For example, a file submitted in an 80 Column format may end in .txt or any other preferred variation; **an XML file should always end in .xml.**

1.6. Data Submission Methods

Contact the NMMSS staff, (803)-725-9811, for additional directions regarding the use of SIMEX, Direct Link, or electronic mail. Electronic data may be mailed through the U.S. Postal Service on electronic media to the following address.

**U.S. Department of Energy
Savannah River Nuclear Solutions
NMMSS Operations
Building 703-45A
Aiken, SC 29808**

(For classified documents) **Refer to SIMS for a Classified Address**
(For unclassified documents) **Attn: NMMSS Project / Jerry O'Leary**

When mailing electronic media to NMMSS label the media with the following information:

- Licensee's RIS (Reporting Identification Symbol of the data source)
- Name and telephone number of the person to contact if there are problems or questions
- Name of the data file
- Any special instructions, comments or explanations

Note: A printed listing of the electronic data may be included with the electronic media and may expedite data processing in the event a damaged disk is received. It is not necessary to include the DOE/NRC forms when submitting data electronically to the NMMSS.

2. TRANSACTION DATA

2.1. Requirements for DOE/NRC Form 741 and Concise Notes

2.1.1. XML File Formatting

An example of transaction submission in XML format is shown below. Additional examples are shown in Appendix B along with the corresponding DOE/NRC forms.

```
<TRANSACTIONS>
  <SHIPMENT SHIPPERRIS="ABC" RECEIVERRIS="DEF" TRANSFERNUMBER="00000131" CORRECTION=""
PROCESSCODE="A" ACTIONCODE="A" NUMBEROFLINES="1" NATUREOFTRANSACTION="W" SHIPPEDFORRIS="FGG"
SHIPPEDTORIS="HIJ" TRANSFERAUTHORITY="" UKFLAG="N" ACTIONDATE="12/31/2002" LICENSENUMBER="987654321"
TOTALGROSSWEIGHT="20081" TOTALVOLUME="45645" SEALEDSOURCE="" TOTRANSFERAUTHORITY="">
    <CONCISENOTE LINENUMBER="1" ENTRYREFERENCE="Whole report" TEXTOFCONCISENOTE="Note text goes here">
    </CONCISENOTE>
    <OBLIGATION>
      <MATERIAL LINENUMBER="1" COUNTRYCODE="32">
        <ELEMENT ELEMENTWEIGHT="12333.00" UNIT="">
          <ISOTOPE MATERIALTYPE="10" ISOTOPEWEIGHT="999.00" UNIT=""/>
        </ELEMENT>
      </MATERIAL>
    </OBLIGATION>
    <MATERIAL PROJECT="ACD1209873" COEILINENUMBER="809" TYPEINVENTORYCHANGE="" OWNER="G"
KEYMEASUREPOINT="W" MEASUREBASIS="E" OTHERMEASUREPOINT="R" MEASUREMETHOD="T"
GROSSWEIGHT="100.00" NETWEIGHT="100.00" TOPROJECT="" TOCOEILINENUMBER="" BACKREFLINENUMBER="001"
LINENUMBER="1" BATCH="BATCH 0411H" NUMBEROFITEMS="5">
      <ELEMENT ELEMENTWEIGHT="455555.00" ELEMENTLOE="5" UNIT="">
        <ISOTOPE MATERIALTYPE="10" WEIGHTPERCENT="16.0000" ISOTOPEWEIGHT="456.00" ISOTOPELOE="65"
UNIT="">
      </ISOTOPE>
    </ELEMENT>
  </MATERIAL>
</SHIPMENT>
</TRANSACTIONS>
```

Root Tag <TRANSACTIONS>

Header Information <SHIPMENT>

<u>Field Description</u>	<u>741</u>	<u>XML Attribute</u>	<u>Type</u>	<u>Essential</u>	<u>Note</u>
Shipper RIS	1	SHIPPERRIS	Char(4)	✓	
Receiver RIS	2	RECEIVERRIS	Char(4)	✓	
Transaction/Transfer Number	3	TRANSFERNUMBER	Char(8)	✓	Right justified Zero fill blanks
Correction Number	4	CORRECTION	Char(1)		
Process Code	5	PROCESSCODE	Char(1)	✓	See Appendix A.
Action Code	6	ACTIONCODE	Char(1)	✓	
Number of Data Lines	10	NUMBEROFLINES	Num(5)	✓	
TI Code/Nature of Transaction	11	NATUREOFTRANSACTION	Char(1)		
RIS For Account	12b	SHIPPEDFORRIS	Char(4)		
RIS To Account	13b	SHIPPEDTORIS	Char(4)		
Transfer Authority	14	TRANSFERAUTHORITY	Char(17)		

IAEA UK Reportable ¹	23c	UKFLAG	Char(1)	
Action Date	22	ACTIONDATE	Date	MM/DD/YYYY
License Number	15	LICENSENUMBER	Char(10)	
Total Gross Weight	24	TOTALGROSSWEIGHT	Num(10)	Whole numbers
Total Volume ²	25	TOTALVOLUME	Num(10)	Whole numbers
Sealed Source		SEALEDSOURCE	Char(10)	List tag only
Receiving Transfer Authority		TOTRANSFERAUTHORITY	Char(17)	List tag only

Concise Note Information <CONCISENOTE>

Note: if concise note information is not reported, there is no need to include a Concise Note section.

<u>Field Description</u>	<u>740M</u>	<u>XML Attribute</u>	<u>Type</u>	<u>Essential</u>	<u>Note</u>
Line Number	7a	LINENUMBER	Num(2)		
Entry Reference	7b	ENTRYREFERENCE	Char(20)		
Concise Note Text	7c	TEXTOFCONCISENOTE	Char(60)		

Material Description Information <MATERIALDESCRIPTION>

<u>Field Description</u>	<u>741</u>	<u>XML Attribute</u>	<u>Type</u>	<u>Essential</u>	<u>Note</u>
Description		DESCRIPTION	Char(1000)		

Miscellaneous Information <MISCELLANEOUS>

<u>Field Description</u>	<u>741</u>	<u>XML Attribute</u>	<u>Type</u>	<u>Essential</u>	<u>Note</u>
Text		TEXT	Char(1000)		

Obligation Information <OBLIGATION>

Note: if obligated data is not reported, there is no need to include an Obligation section.

Obligation Information <MATERIAL>

<u>Field Description</u>	<u>741</u>	<u>XML Attribute</u>	<u>Type</u>	<u>Essential</u>	<u>Note</u>
Line Number	17	LINENUMBER	Num(5)	✓	
Country ³	18	COUNTRYCODE	Char(2)		

Obligation Information <ELEMENT>

<u>Field Description</u>	<u>741</u>	<u>XML Attribute</u>	<u>Type</u>	<u>Essential</u>	<u>Note</u>
Obligated Element Weight ⁴	20	ELEMENTWEIGHT	Num(15,3)	✓	Value must include a decimal point.
Unit of Measure		UNIT	Char(4)		List tag only

Obligation Information <ISOTOPE>

<u>Field Description</u>	<u>741</u>	<u>XML Attribute</u>	<u>Type</u>	<u>Essential</u>	<u>Note</u>
Material Type	19	MATERIALTYPE	Char(2)		

¹ The IAEA UK reportable indication is only required for transactions involving United Kingdom facilities. Reporting 'R' indicates that the UK data is reportable to the IAEA. Reporting 'N' indicates that the UK data is not reportable to the IAEA. Leave this field blank for data that does not involve the United Kingdom facilities.

² Report total volume in cubic feet for material transferred to or from a nuclear waste management facility.

³ Call the NMMSS or go to NMMSS.com for the latest list of obligation country.

⁴ The RIS must attain authorization from NRC to report to the 3rd decimal. Three decimal reporting is only allowed when reporting Source Material.

Obligated Isotope Weight ^{5,6}	21	ISOTOPEWEIGHT	Num(15,3)	✓	
					<i>Value must include a decimal point.</i>
Unit of Measure		UNIT	Char(4)		List tag only

Detail Information <MATERIAL>

Note: If both the element weight and isotope weight are zero, there is no need to include a Material section.

<u>Field Description</u>	<u>741</u>	<u>XML Attribute</u>	<u>Type</u>	<u>Essential</u>	<u>Note</u>
Project Number ⁷	26/27 f	PROJECT	Char(10)		
Composition Facility Code	26/27 h	COEILINENUMBER	Char(4)		
Type of Inventory Change	26/27 c	TYPEINVENTORYCHANGE	Char(2)		
Owner Code	26/27 i	OWNER	Char(1)		
Key Measurement Point	26/27 j	KEYMEASUREPOINT	Char(2)		
Measurement Basis	26/27 k1	MEASUREBASIS	Char(1)		
Other Measurement Point	26/27 k2	OTHERMEASUREPOINT	Char(2)		
Measurement Method	26/27 k3	MEASUREMETHOD	Char(1)		
Gross Weight	26/27 l	GROSSWEIGHT	Num(10)		
Net Weight	26/27 m	NETWEIGHT	Num(10)		
Receiving Project Number		TOPROJECT	Char(10)		List tag only
Receiving Composition Facility Code		TOCOEILINENUMBER	Char(4)		List tag only
Back Reference Number ⁸	26/27 a	BACKREFLINENUMBER	Char(3)		Zero fill blanks
Line Number	26/27 b	LINENUMBER	Num(5)	✓	
Batch Name/Identification	26/27 d	BATCH	Char(16)		ALL Caps
Number of Items	26/27 e	NUMBEROFITEMS	Num(2)		

Detail Information <ELEMENT>

<u>Field Description</u>	<u>741</u>	<u>XML Attribute</u>	<u>Type</u>	<u>Essential</u>	<u>Note</u>
Element Weight ⁵	26/27 n	ELEMENTWEIGHT	Num(12,3)	✓ ⁹	
					<i>Value must include a decimal point.</i>
Element Limit of Error	26/27 o	ELEMENTLOE	Num(5)		Whole numbers
Unit of Measure		UNIT	Char(4)		List tag only

⁵ The RIS must attain authorization from NRC to report to the 3rd decimal. Three decimal reporting is only allowed when reporting Source Material.

⁶ Obligated Isotope Weight is required for Enriched Uranium only.

⁷ Project numbers are reported only for government owned material.

⁸ Back Reference Number; the first character is the correction identifier. The second and third characters are the line number referenced. When reported, insert zeros for blank values.

⁹ Element or Isotope weight may be essential to successful file import depending on the specified material type.

Detail Information <ISOTOPE>

<u>Field Description</u>	<u>741</u>	<u>XML Attribute</u>	<u>Type</u>	<u>Essential</u>	<u>Note</u>
Material Type	26/27 g	MATERIALTYPE	Char(2)		
Weight Percent Isotope/Parts Per Million	26/27 p	WEIGHTPERCENT	Num(6,4) ¹⁰		
					<i>Value must include a decimal point.</i>
Isotope Weight ¹¹	26/27 q	ISOTOPEWEIGHT	Num(12,3)	✓ ¹²	
					<i>Value must include a decimal point.</i>
Isotope Limit of Error	26/27 r	ISOTOPELOE	Num(5)		Whole numbers
Unit of Measure		UNIT	Char(4)		List tag only

¹⁰ Weight Percent Isotope/Parts Per Million is reported as a percentage except when the material type is 70 (total uranium enriched in U-233), which is reported using 6 numeric digits and converted to decimal form by NMMSS.

¹¹ The RIS must attain authorization from NRC to report to the 3rd decimal. Three decimal reporting is only allowed when reporting Source Material.

¹² Element or Isotope weight may be essential to successful file import depending on the specified material type.

An example of a transaction submission in an 80 column file format document is shown below. Additional examples are shown in Appendix B along with the corresponding DOE/NRC forms. Note that gridlines and the numbering structure at the top are not a part of the data submission. They are provided for demonstration purposes only

		1		2		3		4		5		6		7				
1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9
ABC	DEF	000	131	A	A103													
ABC	DEF	000	131	A	A201	A	BATCH	ID		1			10309	J			12312002	
ABC	DEF	000	131	A	A501						42600			6610			300	
ABC	DEF	000	131	A	A202	A	BATCH	ID		1			20309	J				
ABC	DEF	000	131	A	A502						221300			25305			5600	
ABC	DEF	000	131	A	A203	A	BATCH	ID		1			50309	J				
ABC	DEF	000	131	A	A503						90100			993340			89500	
ABC	DEF	000	131	A	A4										20081			

<u>Field Description</u>	<u>741</u>	<u>80 Column File</u>		<u>Format</u>	<u>Position</u>	
		<u>Begin</u>	<u>End</u>	<u>Type</u>	<u>Essential</u>	<u>Note</u>
Shipper RIS	1	1	4	Char(4)	✓	Left justified
Receiver RIS	2	5	8	Char(4)	✓	Left justified
Transaction/Transfer Number	3	9	14	Char(6)	✓	Right justified Zero fill blanks
Correction Number (Change Digit)	4	15	15	Char(1)		
Process Code	5	16	16	Char(1)	✓	See Appendix A
Action Code	6	18	18	Char(1)	✓	
Data Code	-	19	19	Num(1)	✓	Value is 1
Number of Data Lines	10	20	21	Num(2)	✓	Right justified
TI Code/Nature of Transaction	11	22	22	Char(1)		
RIS For Account	12	23	26	Char(4)		Left justified
RIS To Account	13	27	30	Char(4)		Left justified
Transfer Authority	14	34	50	Char(17)		Left justified
IAEA UK Reportable ¹³	23c	69	69	Char(1)		
Action Date	22	70	77	Date		MMDDYYYY

Visual representation of field placement in 80 Column File formatting of transaction header information.																																																	
741A Header Information (Data Code 1)																																																	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40										
Shipper RIS				Receiver RIS				Transfer Num				CoPC				ACDC				#Line				T		RIS For Acct				RIS To Acct								Trar											
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80										
Transfer Authority																														U										Action Date									

¹³ The IAEA UK reportable indication is only required for transactions involving United Kingdom facilities. Reporting 'R' indicates that the UK data is reportable to the IAEA. Reporting 'N' indicates that the UK data is not reportable to the IAEA. Leave this field blank for data that does not involve the United Kingdom facilities.

<u>Field Description</u>	<u>741</u>	<u>80 Column File</u>		<u>Type</u>	<u>Essential</u>	<u>Note</u>
		<u>Begin</u>	<u>End</u>			
Shipper RIS	1	1	4	Char(4)	✓	Left justified
Receiver RIS	2	5	8	Char(4)	✓	Left justified
Transaction/Transfer Number	3	9	14	Char(6)	✓	Right justified Zero fill blanks
Correction Number (Change Digit)	4	15	15	Char(1)		
Process Code	5	16	16	Char(1)	✓	See Appendix A.
Action Code	6	18	18	Char(1)	✓	
Data Code	-	19	19	Num(1)	✓	Value is 2
Line Number	26/27 b	20	21	Num(2)	✓	Right justified
Type of Inventory Change	26/27 c	22	23	Char(2)		
Batch Name/Identification	26/27 d	24	39	Char(16)		Left justified All Caps
Number of Items	26/27 e	40	43	Num(4)		Right justified
Project Number ¹⁴	26/27 f	44	53	Char(10)		Left justified
Material Type	26/27 g	54	55	Char(2)		Left justified
Composition-Facility Code	26/27 h	56	59	Char(4)		Left justified
Owner Code	26/27 i	61	61	Char(1)		
Key Measurement Point	26/27 j	70	71	Char(2)		Left justified
Measurement Basis	26/27 k1	72	72	Char(1)		
Other Measurement Point	26/27 k2	73	74	Char(2)		Left justified
Measurement Method	26/27 k3	75	75	Char(1)		
Back Reference Number ¹⁵	26/27 a	76	78	Char(3)		Zero fill blanks

Visual representation of field placement in 80 column file formatting of transaction detail information.																																								
741A, Detail Information (Data Code 2)																																								
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	
Shipper RIS				Receiver RIS				Transfer Num				CoPC		AQDC		Line#		TIC		Batch ID																				
1	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
# Items				Project #				MT		Comp Code		O																		KMP		Mb		OMP		Mnt		B Ref#		

¹⁵ Back Reference Number; the first character is the correction identifier. The second and third characters are the line number referenced. When reported, insert zeros for blank values.

Quantitative Detail Information (Data Code 5)

<u>Field Description</u>	<u>741</u>	<u>80 Column File</u>		<u>Type</u>	<u>Essential</u>	<u>Note</u>
		<u>Begin</u>	<u>End</u>			
Shipper RIS	1	1	4	Char(4)	✓	Left justified
Receiver RIS	2	5	8	Char(4)	✓	Left justified
Transaction/Transfer Number	3	9	14	Char(6)	✓	Right justified Zero fill blanks
Correction Number (Change Digit)	4	15	15	Char(1)		
Process Code	5	16	16	Char(1)	✓	See Appendix A.
Action Code	6	18	18	Char(1)	✓	
Data Code	-	19	19	Num(1)	✓	Value is 5
Line Number	26/27 b	20	21	Num(2)	✓	Right justified
Gross Weight	26/27 l	22	26	Num(5)		Right justified
Net Weight	26/27 m	27	34	Num(8)		Right justified
Element Weight	26/27 n	43	53	Num(11,2)	✓ ¹⁶	Right justified
<i>The value can contain a decimal point. Only XML format accepts 3 decimal place values.</i>						
Element Limit of Error	26/27 o	54	58	Num(5)		Right justified
Weight Percent Isotope/Parts Per Million	26/27 p	59	64	Num(6,4) ¹⁷		Right justified
<i>The value can contain a decimal point.</i>						
Isotope Weight	26/27 q	65	75	Num(11,2)	✓ ¹⁶	Right justified
<i>The value can contain a decimal point. Only XML format accepts 3 decimal place values.</i>						
Isotope Limit of Error	26/27 r	76	80	Num(5)		Right justified

Note: If both the element weight and isotope weight are zero, there is no need to submit a data line for data code 2 and 5.

Visual representation of field placement in 80 Column File formatting of transaction detail information.

741A Detail Information (Data Code 5)

1-14 Detail Information (Data Code 0)																																							
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Shipper RIS				Receiver RIS				Transaction Num				Co PC		AC DC		Line#		Gross Weight				Net Weight																	

41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
Element Weight												Ele Limit of Error				Weight %				Isotope Weight								Iso Limit of Error											

¹⁶ Element or Isotope weight may be essential to successful file import depending on the specified material type.

¹⁷ Weight Percent Isotope/Parts Per Million is reported as a percentage except when the material type is 70 (total uranium enriched in U-233), which is reported using 6 numeric digits and converted to decimal form by NMMSS.

<u>Field Description</u>	<u>741</u>	<u>80 Column File</u>		<u>Format</u>	<u>Position</u>	
		<u>Begin</u>	<u>End</u>	<u>Type</u>	<u>Essential</u>	<u>Note</u>
Shipper RIS	1	1	4	Char(4)	✓	Left justified
Receiver RIS	2	5	8	Char(4)	✓	Left justified
Transaction/Transfer Number	3	9	14	Char(6)	✓	Right justified Zero fill blanks
Correction Number (Change Digit)	4	15	15	Char(1)		
Process Code	5	16	16	Char(1)	✓	See Appendix A.
Action Code	6	18	18	Char(1)	✓	
Data Code	-	19	19	Num(1)	✓	Value is 3
License Number (Import/Export)	15	22	31	Char(10)		Left justified

[illegible]

<u>Field Description</u>	<u>741</u>	<u>80 Column File Format Position</u>				
		<u>Begin</u>	<u>End</u>	<u>Type</u>	<u>Essential</u>	<u>Note</u>
Shipper RIS	1	1	4	Char(4)	✓	Left justified
Receiver RIS	2	5	8	Char(4)	✓	Left justified
Transaction/Transfer Number	3	9	14	Char(6)	✓	Right justified Zero fill blanks
Correction Number (Change Digit)	4	15	15	Char(1)		
Process Code	5	16	16	Char(1)	✓	See Appendix A.
Action Code	6	18	18	Char(1)	✓	
Data Code	-	19	19	Num(1)	✓	Value is 4
Total Gross Weight	24	57	66	Num(10)		Right justified Whole number
Total Volume ¹⁸	25	67	75	Num(9)		Right justified Whole number

Note: if total gross weight and/or total volume is not reported, there is no need to submit a data line for data code 4.

Visual representation of field placement in 80 Column File formatting of transaction package information.																																							
741A Packaging Information (Data Code 4)																																							
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Shipper RIS				Receiver RIS				Transaction Num								CoPC		AQDC																					
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
																Total Gross Weight										Total Volume													

¹⁸ Report total volume in cubic feet for material transferred to or from a nuclear waste management facility.

<u>Field Description</u>	<u>741</u>	<u>80 Column File</u>		<u>Format Position</u>		
		<u>Begin</u>	<u>End</u>	<u>Type</u>	<u>Essential</u>	<u>Note</u>
Shipper RIS	1	1	4	Char(4)	✓	Left justified
Receiver RIS	2	5	8	Char(4)	✓	Left justified
Transaction/Transfer Number	3	9	14	Char(6)	✓	Right justified Zero fill blanks
Correction Number (Change Digit)	4	15	15	Char(1)		
Process Code	5	16	16	Char(1)	✓	See Appendix A.
Action Code	6	18	18	Char(1)	✓	
Data Code	-	19	19	Num(1)	✓	Value is 7
Line Number	17	20	21	Num(2)		Right justified
Material Type	19	22	23	Char(2)		Left justified
Obligated Element Weight	20	24	34	Num(11,2)	✓	Right justified
<i>The value can contain a decimal point. Only XML format accepts 3 decimal place values.</i>						
Obligated Isotope Weight ¹⁹	21	35	45	Num(11,2)		Right justified
<i>The value can contain a decimal point.</i>						
Country ²⁰	18	46	47	Char(2)		Left justified

Note: if obligated data is not reported, there is no need to submit a data line for data code 7.

741A Obligation Information (Data Code 7)																																								
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	
Shipper RIS				Receiver RIS				Transaction Num				CdPC				ADC				Line#				MT				Element Weight								Isotope W				
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	
weight						Ctry																																		

¹⁹ Obligated Isotope Weight is required for Enriched Uranium only.

²⁰ Call the NMMSS or go to NMMSS.com for the latest list of obligation country.

Field Description

740M 80 Column File
Format Position

Note: if concise note information is not reported, there is no need to submit a data line for data code 6.

740M Concise Note (Data Code 6)																																								
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Shipper RIS		Receiver RIS		Transaction Num				CoPC		ACDC												Entry Reference																Line #		
42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80		

3. INVENTORY DATA

3.1. Requirements for DOE/NRC Form 742C

3.1.1. XML File Formatting

An example of an inventory submission in XML format is shown below. Additional examples are shown in Appendix B along with the corresponding DOE/NRC form.

```
<PHYSICALINVENTORY>
<INVENTORY RIS="ABC" DATE="02/28/2001" >
  <CONCISENOTE PROCESSCODE="A" LINENUMBER="1" ENTRYREFERENCE="Whole report"
  TEXTOFCONCISENOTE="Note text goes here">
  </CONCISENOTE>
  <MATERIAL PROCESSCODE="A" SEQUENCENUMBER="2" PROJECT="AAE2021003" COELINENUMBER="385"
  OWNER="G" KEYMEASUREPOINT="E" MEASUREBASIS="F" OTHERMEASUREPOINT="B" MEASUREMETHOD="T"
  SCRAPPGRAM=" " ENTRYSTATUS=" " NUMBEROFITEMS="500" BATCH="BATCH001" LOCATION=" " SITEMBA=" ">
    <CONCISENOTE PROCESSCODE="A" LINENUMBER="1" ENTRYREFERENCE="Whole report"
    TEXTOFCONCISENOTE="Note text goes here">
    </CONCISENOTE>
    <ELEMENT ELEMENTWEIGHT="10.00" UNIT=" ">
      <ISOTOPE MATERIALTYPE="31" WEIGHTPERCENT="16.0000" ISOTOPEWEIGHT="16.00" UNIT=" ">
      </ISOTOPE>
    </ELEMENT>
  </MATERIAL>
</INVENTORY>
</PHYSICALINVENTORY>
```

Root Tag <PHYSICALINVENTORY>

Header Information <INVENTORY>

<u>Field Description</u>	<u>742C</u>	<u>XML Attribute</u>	<u>Type</u>	<u>Essential</u>	<u>Note</u>
RIS	2	RIS	Char(4)	✓	
Inventory Report Date	3	DATE	Date	✓	MM/DD/YYYY

Concise Note Information Attached to Header <CONCISENOTE>

Note: if concise note information is not reported, there is no need to include a Concise Note section.

<u>Field Description</u>	<u>740M</u>	<u>XML Attribute</u>	<u>Type</u>	<u>Essential</u>	<u>Note</u>
Process Code	5e	PROCESSCODE	Char(1)	✓	See Appendix A.
Line Number	7a	LINENUMBER	Num(2)		
Entry Reference	7b	ENTRYREFERENCE	Char(20)		
Concise Note Text	7c	TEXTOFCONCISENOTE	Char(60)		

Detail Information <MATERIAL>

Note: If both the element weight and isotope weight are zero, there is no need to include a Material section.

<u>Field Description</u>	<u>742C</u>	<u>XML Attribute</u>	<u>Type</u>	<u>Essential</u>	<u>Note</u>
Process Code	5q	PROCESSCODE	Char(1)	✓	See Appendix A.

Sequence Number ²¹	5i	SEQUENCENUMBER	Num(6)	✓
Project Number ²²	5e	PROJECT	Char(10)	
Composition-Facility Code ²³	5b	COEILINENUMBER	Char(4)	
Owner Code	5h	OWNER	Char(1)	
Key Measurement Point	5l	KEYMEASUREPOINT	Char(2)	
Measurement Basis	5m	MEASUREBASIS	Char(1)	
Other Measurement Point	5m	OTHERMEASUREPOINT	Char(2)	
Measurement Method	5m	MEASUREMETHOD	Char(1)	
Scrap Program	5f	SCRAPPROGRAM	Char(1)	
Entry Status	5n	ENTRYSTATUS	Char(1)	
Number of Items	5k	NUMBEROFITEMS	Num(5)	
Batch Name/Identification	5j	BATCH	Char(16)	All Caps
Location of Item	5o	LOCATION	Char(30)	
Site MBA Code	5p	SITEMBA	Char(30)	

Concise Note Information Attached to Material (Item) <CONCISENOTE>

Note: if concise note information is not reported, there is no need to include a Concise Note section.

<u>Field Description</u>	<u>740M</u>	<u>XML Attribute</u>	<u>Type</u>	<u>Essential</u>	<u>Note</u>
Process Code	5e	PROCESSCODE	Char(1)	✓	See Appendix A.
Line Number	7a	LINENUMBER	Num(2)		
Entry Reference	7b	ENTRYREFERENCE	Char(20)		
Concise Note Text	7c	TEXTOFCONCISENOTE	Char(60)		

Detail Information <ELEMENT>

<u>Field Description</u>	<u>742C</u>	<u>XML Attribute</u>	<u>Type</u>	<u>Essential</u>
Element Weight ²⁴	5c	ELEMENTWEIGHT	Num(15,3)	✓ ²⁵
				Value must include a decimal point.
Unit of Measure		UNIT	Char(4)	List tag only

Detail Information <ISOTOPE>

<u>Field Description</u>	<u>742C</u>	<u>XML Attribute</u>	<u>Type</u>	<u>Essential</u>
Material Type	5a	MATERIALTYPE	Char(2)	
Weight Percent Isotope/Parts Per Million	5g	WEIGHTPERCENT	Num(6,4) ²⁶	
				Value must include a decimal point.
Isotope Weight ²⁴	5d	ISOTOPEWEIGHT	Num(15,3)	✓ ²⁵
				Value must include a decimal point.
Unit of Measure		UNIT	Char(4)	List tag only

²¹ Sequence number should begin at one for the entire inventory or each material type group (Generic MT 20 includes MT 21 – 39 and E1 – E4) and should be consecutively numbered including the total line (composition code 899).

²² Project numbers are reported only for government owned material.

²³ For total lines, this field will always contain "899".

²⁴ The RIS must attain authorization from NRC to report to the 3rd decimal. Three decimal reporting is only allowed when reporting Source Material.

²⁵ Element or Isotope weight may be essential to successful file import depending on the specified material type.

²⁶ Weight Percent Isotope/Parts Per Million is reported as a percentage except when the material type is 70 (total uranium enriched in U-233), which is reported using 6 numeric digits and converted to decimal form by NMMSS.

An example of an inventory submission in an 80 column file format document is shown below. Additional examples are shown in Appendix B along with the corresponding DOE/NRC form. Note that gridlines and the numbering structure at the top are not a part of the data submission. They are provided for demonstration purposes only.

[illegible]

<u>Field Description</u>	<u>742C</u>	<u>80 Column File</u>			<u>Essential</u>	<u>Note</u>		
		<u>Format</u>		<u>Type</u>				
		<u>Begin</u>	<u>End</u>					
Data Code	-	1	1	Num(1)	✓	Value is 1		
Inventory Report Date	3	2	9	Date	✓	MMDDYYYY		
RIS	2	10	13	Char(4)	✓	Left justified		
Material Type Code	5a	14	15	Char(2)	✓	Left justified		
Composition-Facility Code ²⁷	5b	16	19	Char(4)	✓	Left justified		
Element Weight	5c	20	32	Num(13,2)	✓ ²⁸	Right justified		
<i>The value can contain a decimal point. Only XML format accepts 3 decimal place values.</i>								
Isotope Weight	5d	33	45	Num(13,2)	✓ ²⁸	Right justified		
<i>The value can contain a decimal point.</i>								
Project Number ²⁹	5e	46	55	Char(10)		Left justified		
Scrap Program	5f	56	56	Char(1)		Leave blank		
Weight Percent Isotope/Parts Per Million	5g	61	66	Num(6,4) ³⁰		Right justified		
<i>The value can contain a decimal point. Only XML format accepts 3 decimal place values.</i>								
Owner Code	5h	68	68	Char(1)				
Process Code	5q	74	74	Char(1)	✓	See Appendix A.		
Sequence Number Code ³¹	5i	75	80	Num(6)	✓	Right justified		

²⁷ For total lines, this field will always contain "899"

²⁸ Element or Isotope weight may be essential to successful file import depending on the specified material type.

²⁹ Project numbers are reported only for government owned material.

³⁰ Weight Percent Isotope/Parts Per Million is reported as a percentage except when the material type is 70 (total uranium enriched in U-233), which is reported using 6 numeric digits and converted to decimal form by NMMSS.

³¹ Sequence number should begin at one for the entire inventory or each material type group (Generic MT 20 includes MT 21 – 39) and should be consecutively numbered including the total line (composition code 899).

733 Header Information (Data Code 1)

[illegible]

<u>Field Description</u>	<u>742C</u>	<u>80 Column File</u>		<u>Format Position</u>		
		<u>Begin</u>	<u>End</u>	<u>Type</u>	<u>Essential</u>	<u>Note</u>
Data Code	-	1	1	Num(1)	✓	Value is 2
Inventory Report Date	3	2	9	Date	✓	MMDDYYYY
RIS	2	10	13	Char(4)	✓	Left justified
Material Type	5a	14	15	Char(2)	✓	Left justified
Composition-Facility Code ³²	5b	16	19	Char(4)	✓	Left justified
Batch Identification	5j	20	35	Char(16)		Left justified All Caps
Number of Items	5k	36	39	Num(4)		Right justified
Key Measurement Point	5l	40	41	Char(2)		Left justified
Measurement Basis	5m	42	42	Char(1)		
Other Measurement Point	5m	43	44	Char(2)		Left justified
Measurement Method	5m	45	45	Char(1)		
Entry Status	5n	46	46	Char(1)		
Process Code	5q	74	74	Char(1)	✓	See Appendix A.
Sequence Number ³³	5i	76	80	Num(5)	✓	Right justified

[illegible]

³³ Sequence number should begin at one for the entire inventory or each material type and the pairs of lines (Data Type Code 1 and 2) should be consecutively numbered including the total line (composition code 899). The sequence number for a Data Type Code 1 line should be coded for the corresponding Data Type Code 2 line.

<u>Field Description</u>	<u>742C</u>	<u>80 Column File</u> <u>Format</u> <u>Position</u>
--------------------------	-------------	---

Visual representation of field placement in 80 Column file formatting of inventory detail information.

³⁴ For total lines, this field will always contain “899”

4. MATERIAL BALANCE DATA

4.1. Requirements for DOE/NRC Form 742

4.1.1. XML File Formatting

An example of material balance submission in XML format is shown below. Additional examples are shown in Appendix B along with the corresponding DOE/NRC form.

```
<MATERIALBALANCEREPORT>
  <MATERIALBALANCE RIS="ABC" STARTDATE="02/01/2002" ENDDATE="02/28/2002">
    <CONCISENOTE LINENUMBER="1" ENTRYREFERENCE="WHOLE REPORT" TEXTOFCONCISENOTE="NOTE TEXT
GOES HERE.">
      </CONCISENOTE>
    <MATERIAL PROCESSCODE="A" SEQUENCENUMBER="1" DATACODE="3" MATERTALBALANCECATEGORY="09">
      <CONCISENOTE LINENUMBER="1" ENTRYREFERENCE="WHOLE REPORT" TEXTOFCONCISENOTE="NOTE TEXT
GOES HERE.">
        </CONCISENOTE>
      <ELEMENT ELEMENTWEIGHT="100.00" TYPEINVENTORYCHANGE="PB" OTHERRIS="" ENTRYSTATUS="N" UNIT="">
        <ISOTOPE MATERIALTYPE="10" ISOTOPEWEIGHT="10.00" UNIT="">
          </ISOTOPE>
        </ELEMENT>
      </MATERIAL>
    </MATERIALBALANCE>
  </MATERIALBALANCEREPORT>
```

Root Tag <MATERIALBALANCEREPORT>

Header Information <MATERIALBALANCE>

<u>Field Description</u>	<u>742</u>	<u>XML Attribute</u>	<u>Type</u>	<u>Essential</u>	<u>Note</u>
RIS	3	RIS	Char(4)	✓	
Report Period From	4	STARTDATE	Date	✓	MM/DD/YYYY
Report Period To	4	ENDDATE	Date	✓	MM/DD/YYYY

Concise Note Information Attached to Header <CONCISENOTE>

Note: if concise note information is not reported, there is no need to include a Concise Note section.

<u>Field Description</u>	<u>740M</u>	<u>XML Attribute</u>	<u>Type</u>	<u>Essential</u>	<u>Note</u>
Process Code	5e	PROCESSCODE	Char(1)	✓	See Appendix A.
Line Number	7a	LINENUMBER	Num(2)		
Entry Reference	7b	ENTRYREFERENCE	Char(20)		
Concise Note Text	7c	TEXTOFCONCISENOTE	Char(60)		

Detail Information <Material>

Note: If both the element weight and isotope weight are zero, there is no need to include a Material section.

<u>Field Description</u>	<u>742</u>	<u>XML Attribute</u>	<u>Type</u>	<u>Essential</u>	<u>Note</u>
Process Code	Sec. A & B PC	PROCESSCODE	Char(1)	✓	See Appendix A.
Sequence Number ³⁵	Sec. A & B	SEQUENCENUMBER	Num(6)	✓	

³⁵ Sequence number should begin at one for the entire material balance per material type and should be consecutively numbered.

	SEQ				
Data Code	-	DATACODE	Num(1)	✓	Value is 3 (Receipts) or 4 (Removals)
Material Balance Category ³⁶	Sec A Row # Sec B column 1	MATERIALBALANCECATEGORY	Char(2)		Right justified Zero fill blanks

Concise Note Information Attached to Material (Item) <CONCISENOTE>

Note: if concise note information is not reported, there is no need to include a Concise Note section.

<u>Field Description</u>	<u>740M</u>	<u>XML Attribute</u>	<u>Type</u>	<u>Essential</u>	<u>Note</u>
Process Code	5e	PROCESSCODE	Char(1)	✓	See Appendix A.
Line Number	7a	LINENUMBER	Num(2)		
Entry Reference	7b	ENTRYREFERENCE	Char(20)		
Concise Note Text	7c	TEXTOFCONCISENOTE	Char(60)		

Detail Information <ELEMENT>

<u>Field Description</u>	<u>742</u>	<u>XML Attribute</u>	<u>Type</u>	<u>Essential</u>	<u>Note</u>
Element Weight ³⁷	Sec A column A Sec B Column 2	ELEMENTWEIGHT	Num(15,3)	✓ ³⁸	
Value must include a decimal point.					
Inventory Change Type (ICT) line 22 & 71		TYPEINVENTORYCHANGE	Char(2)		
Other RIS	line 11,30, 42,43 & 51	OTHERRIS	Char(4)		
Entry Status	-	ENTRYSTATUS	Char(1)		
Unit of Measure	-	UNIT	Char(4)		List tag only

Detail Information <ISOTOPE>

<u>Field Description</u>	<u>742</u>	<u>XML Attribute</u>	<u>Type</u>	<u>Essential</u>	<u>Note</u>
Material Type	5	MATERIALTYPE	Char(2)		
Isotope Weight ³⁷	Sec A column B Sec B Column 3	ISOTOPEWEIGHT	Num(15,3)	✓ ³⁸	
Value must include a decimal point.					
Unit of Measure	-	UNIT	Char(4)		List tag only

³⁶ Call the NMMSS or go to NMMSS.com for the latest list of Material Balance Categories codes related to Obligations (Section B)

³⁷ The RIS must attain authorization from NRC to report to the 3rd decimal. Three decimal reporting is only allowed when reporting Source Material.

³⁸ Element or Isotope weight may be essential to successful file import depending on the specified material type.

Examples of material balance submissions in an 80 column file format document are shown below. For corresponding 742 forms showing these examples refer to Appendix B. Note that gridlines and the numbering structure at the top are not a part of the data submission.

[illegible]

<u>Field Description</u>	<u>742</u>	<u>80 Column File</u>			<u>Format</u>	<u>Position</u>	
		<u>Begin</u>	<u>End</u>	<u>Type</u>	<u>Essential</u>	<u>Note</u>	
Data Code	-	1	1	Num(1)	✓	Value is 3 (Receipts) or 4 (Removals)	
RIS	3	2	5	Char(4)	✓	Left justified	
Material Type	5	6	7	Char(2)	✓	Left justified	
Report Period From	4	8	15	Date	✓	MMDDYYYY	
Report Period To	4	16	23	Date	✓	MMDDYYYY	
Element Weight	Sec A column A Sec B Column 2	24	36	Num(13,2)	✓ ³⁹	Right justified	
<i>The value can contain a decimal point. Only XML format accepts 3 decimal place values.</i>							
Isotope Weight	Sec A column B Sec B Column 3	37	49	Num(13,2)	✓ ³⁹	Right justified	
<i>The value can contain a decimal point. Only XML format accepts 3 decimal place values.</i>							
Material Balance Category ⁴⁰	Sec A Row # Sec B column 1	50	51	Char(2)		Right justified Zero fill blanks	
Other RIS	line 11,30, 42,43, & 51	52	55	Char(4)		Left justified	
Inventory Change Type (ICT)	line 22 & 71	56	57	Char(2)		Left justified	
Entry Status	-	58	58	Char(1)			
Process Code	Sec A & B PC	74	74	Char(1)	✓	See Appendix A.	
Sequence Number ⁴¹	Sec A & B SEQ	75	80	Num(6)	✓	Right justified	

³⁹ Element or Isotope weight may be essential to successful file import depending on the specified material type.

⁴⁰ Call the NMMSS or go to NMMSS.com for the latest list of Material Balance Categories codes related to Obligations (Section B)

⁴¹ Sequence number should begin at one for the entire material balance per material type and should be consecutively numbered.

Material Balance Report Detail Information (Data Code 3 & 4)

[illegible]

APPENDIX A

PROCESS CODE

PROCESS CODE

DEFINITION: The process code identifies the type of system action to be taken for the data being reported as follows:

1. Process code A is used to signify the initial submittal of data. Use process code C to replacement a data set already submitted to the NMMSS;
2. Process code C is used to signify the replacement of previously reported data. Its use is restricted to the replacement of data in the same reporting month;
3. Process code D applies when the facility intends the deletion of previously reported data. Its use is also restricted to applying only to data in the same reporting month; and
4. Process code Z is used in conjunction with action code D by the receiver to accept a shipper's change without the receiver having to retype the detailed lines.

SPECIAL NOTE: If replacement or deletion of data is desired, it is suggested that the reporting facility ensures that the accounting month to be affected is still "open" (being processed by the NMMSS) by calling the appropriate NMMSS contact since these actions are restricted and based on specified accounting periods.

Example 1

U.S. DEPARTMENT OF ENERGY AND U.S. NUCLEAR REGULATORY COMMISSION									
NUCLEAR MATERIAL TRANSACTION REPORT									
1. REPORTING SITE ABC		2. REPORTING SITE DEF		3. REPORTING SITE 131		4. CORRECTION NO.		5. RECEIVING CODE	
6. NAME AND ADDRESS OF REPORTER Advanced Physics 123 Anywhere Road Commtown ZA 1111		7. NAME AND ADDRESS OF RECEIVER Advanced Physics 123 Anywhere Road Commtown ZA 1111		8. LICENSE NO.		9. SHIPPER A		10. RECEIVER A	
11. ATTENTION TELEPHONE		12. SHIPPER B		13. RECEIVER B		14. SHIPPER C		15. RECEIVER C	
16. TRANSFER AUTHORITY, CONTRACT, MATERIAL, OR ORDER NUMBER		17. EXPORT OR IMPORT TRANSFER LICENSE NO.		18. NATURE OF TRANSACTION 19. SHIPPER TO ACCOUNT OF N. RA		20. NATURE OF TRANSACTION 21. SHIPPER TO ACCOUNT OF N. RA		22. ACTION DATE	
23. MATERIAL TYPE AND DESCRIPTION		24. NATURE OF TRANSACTION		25. NATURE OF TRANSACTION		26. NATURE OF TRANSACTION		27. ACTION DATE	
28. MATERIAL TYPE AND DESCRIPTION		29. NATURE OF TRANSACTION		30. NATURE OF TRANSACTION		31. NATURE OF TRANSACTION		32. ACTION DATE	
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199. MATERIAL TYPE AND DESCRIPTION		200. NATURE OF TRANSACTION		201. NATURE OF TRANSACTION		202. NATURE OF TRANSACTION		203. ACTION DATE	
204. MATERIAL TYPE AND DESCRIPTION		205. NATURE OF TRANSACTION		206. NATURE OF TRANSACTION		207. NATURE OF TRANSACTION		208. ACTION DATE	
209. MATERIAL TYPE AND DESCRIPTION		210. NATURE OF TRANSACTION		211. NATURE OF TRANSACTION		212. NATURE OF TRANSACTION		213. ACTION DATE	
214. MATERIAL TYPE AND DESCRIPTION		215. NATURE OF TRANSACTION		216. NATURE OF TRANSACTION		217. NATURE OF TRANSACTION		218. ACTION DATE	
219. MATERIAL TYPE AND DESCRIPTION		220. NATURE OF TRANSACTION</							

[illegible]

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Example 2

DO ENR FORM 111				U.S. DEPARTMENT OF ENERGY AND U.S. NUCLEAR REGULATORY COMMISSION				EXPIRES 12/31/10			
ISSUED PREVIOUS EDITIONS ARE OBSOLETE				U.S. NUCLEAR REGULATORY COMMISSION				Estimated burden per response to comply with this mandatory collection request is 15 minutes. This information is required for NRC accounting reports that show changes in inventory of nuclear materials. Send comments regarding burden estimate to the Records Management Branch (74-15), U.S. Nuclear Regulatory Commission, Washington, DC 20545-1141, or by Internet email to: nrc-records@nrc.gov, and to the Data Office, Office of Information Management, NRC, NE-100, Washington, DC 20545-1141. Do not send comments to the Data Office if you are submitting information to the NRC via the Internet.			
1. SHIPPER'S NAME				2. RECEIVERS NAME				3. TRANSACTION NO.			
ABC DEF				131				1			
4. SHIPPER'S ADDRESS				5. LICENSE NO.				6. LICENSE NO.			
Advanced Physics 123 Anywhere Road Commontown ZA 11111											
7. ATTENTION				8. ATTENTION				9. ATTENTION			
A. TELEPHONE				B. TELEPHONE				C. TELEPHONE			
10. TRANSFER AUTHORITY, CONTRACT, INQUIRY, OR ORDER NUMBER				11. REPORT OF MARKET TRANSACTIONS, LICENSE NO.				12. REPORT OF MARKET TRANSACTIONS, LICENSE NO.			
13. MATERIAL TYPE AND DESCRIPTION				14. MATERIAL TYPE				15. MATERIAL TYPE			
21. NUCLEAR MATERIALS				22. NUCLEAR MATERIALS				23. NUCLEAR MATERIALS			
24. NUCLEAR MATERIALS				25. NUCLEAR MATERIALS				26. NUCLEAR MATERIALS			
27. NUCLEAR MATERIALS				28. NUCLEAR MATERIALS				29. NUCLEAR MATERIALS			
29. NUCLEAR MATERIALS				30. NUCLEAR MATERIALS				31. NUCLEAR MATERIALS			
32. NUCLEAR MATERIALS				33. NUCLEAR MATERIALS				34. NUCLEAR MATERIALS			
35. NUCLEAR MATERIALS				36. NUCLEAR MATERIALS				37. NUCLEAR MATERIALS			
38. NUCLEAR MATERIALS				39. NUCLEAR MATERIALS				40. NUCLEAR MATERIALS			
41. NUCLEAR MATERIALS				42. NUCLEAR MATERIALS				43. NUCLEAR MATERIALS			
44. NUCLEAR MATERIALS				45. NUCLEAR MATERIALS				46. NUCLEAR MATERIALS			
47. NUCLEAR MATERIALS				48. NUCLEAR MATERIALS				49. NUCLEAR MATERIALS			
50. NUCLEAR MATERIALS				51. NUCLEAR MATERIALS				52. NUCLEAR MATERIALS			
53. NUCLEAR MATERIALS				54. NUCLEAR MATERIALS				55. NUCLEAR MATERIALS			
56. NUCLEAR MATERIALS				57. NUCLEAR MATERIALS				58. NUCLEAR MATERIALS			
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62. NUCLEAR MATERIALS				63. NUCLEAR MATERIALS				64. NUCLEAR MATERIALS			
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68. NUCLEAR MATERIALS				69. NUCLEAR MATERIALS				70. NUCLEAR MATERIALS			
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92. NUCLEAR MATERIALS				93. NUCLEAR MATERIALS				94. NUCLEAR MATERIALS			
95. NUCLEAR MATERIALS				96. NUCLEAR MATERIALS				97. NUCLEAR MATERIALS			
98. NUCLEAR MATERIALS				99. NUCLEAR MATERIALS				100. NUCLEAR MATERIALS			

80 Column format:

Example 2 Transaction Correction

1										2										3										4										5										6										7										8									
1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0																														
ABC	DEF	000	1311A	C104																																																																											
ABC	DEF	000	1311A	C201																																																																											
ABC	DEF	000	1311A	C501																																																																											
ABC	DEF	000	1311A	C202																																																																											
ABC	DEF	000	1311A	C502																																																																											
ABC	DEF	000	1311A	C203																																																																											
ABC	DEF	000	1311A	C503																																																																											
ABC	DEF	000	1311A	C204																																																																											
ABC	DEF	000	1311A	C504																																																																											

XML format:

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</MATERIAL>

</SHIPMENT>

</TRANSACTIONS>

Example 3a

[illegible]

Example 3b

[illegible]

Example 3c

U.S. DEPARTMENT OF ENERGY AND U.S. NUCLEAR REGULATORY COMMISSION							APPROVED BY OMB NO. 3150-0068			EXPIRES 05/31/2002	
CONCISE NOTE											
1. NAME		2. ATTACHMENT TO		3. RIS		4. REPORTING PERIOD					
Advanced Physics		<input checked="" type="checkbox"/> A. DOE/NRC T-41 <input type="checkbox"/> B. DOE/NRC T-42 <input type="checkbox"/> C. DOE/NRC T-43				FROM		TO			
STREET ADDRESS		5. TRANSACTION DATA									
123 Anywhere Road		A. SHIPPER'S REF	B. RECEIVER'S REF	C. TRANSFER NUMBER	D. CORR. NUMBER	E. RC	F. AC	6. REPORTING DATE			
CITY Commontown		STATE ZA	ZIP CODE 11111	RGHI	10257	A	A				
7B. ENTRY REFERENCE		7C. TEXT OF CONCISE NOTE									
7A. LINE NO.											
01	Whole Report	Country of Oblig Code 32 Canada BL18									
02	Whole Report	MBA Code UABC BL1									
03	Whole Report	Batch ID -Any Batch Name- BL24d									
04	Whole Report	Material Type Code BL24g as follows:									
05	Whole Report	US material type 10 is IAEA code D									
06	Whole Report	US material type 20 is IAEA code EG									
		To the best of my knowledge and belief, the information given above and in any attached schedules is true, complete, and correct.									
		9. TITLE		10. DATE							
		John Doe		12/31/2002							

WARNING: FALSE STATEMENTS IN THIS CERTIFICATE MAY BE SUBJECT TO CIVIL AND/OR CRIMINAL PENALTIES. NRC REGULATIONS REQUIRE THAT SUBMITTERS COMPLETELY ACCURATELY ALLOCATE ALL MATERIAL RESPECTS TO USC SECTION 1001 MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTION.

Example 3d

[illegible]

80 Column format:

Example 3 a, b, c, d Submission of Multiple Transactions including Concise Notes

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1	2	3	4	5	6	7	8
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ABC	RGHI	10257	A A102			12312002	
ABC	RGHI	10257	A A201	1	10309	J	
ABC	RGHI	10257	A A501		42000	6610	300
ABC	RGHI	10257	A A202	1	20309	J	
ABC	RGHI	10257	A A502		221300	25305	5600
ABC	RGHI	10257	A A3 GEN- LIC				
ABC	RGHI	10257	A A4			58499	
ABC	RGHI	10257	A A70110	42600	32		
ABC	RGHI	10257	A A70220	221300	560032		
ABC	RGHI	10257	A A6WHOLEREPORT	01	COUNTRY OF OBLIG CODE 32	CANADA BL18	
ABC	RGHI	10257	A A6WHOLEREPORT	02	MBA CODE UABC BL1		
ABC	RGHI	10257	A A6WHOLEREPORT	03	BATCH ID -ANY BATCH NAME- BL24D		
ABC	RGHI	10257	A A6WHOLEREPORT	04	MATERIAL TYPE CODE BL24G AS FOLLOWS		
ABC	RGHI	10257	A A6WHOLEREPORT	05	US MATERIAL TYPE 10 IS IAEA CODE D		
ABC	RGHI	10257	A A6WHOLEREPORT	06	US MATERIAL TYPE 20 IS IAEA CODE EG		
ABC	ABC	21229	A M102			12312002	
ABC	ABC	21229	A M201NP		50309	J	
ABC	ABC	21229	A M501	476700	456681		125500
ABC	ABC	21229	A M202TN		50309	J	
ABC	ABC	21229	A M502	1094500	244303		1094500

XML format:

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TOTALVOLUME="" SEALEDSSOURCE="" TOTTRANSFERAUTHORITY="">

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TOTTRANSFERAUTHORITY="">

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</CONCISENOTE>

<CONCISENOTE LINENUMBER="6" ENTRYREFERENCE="WHOLE REPORT"

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GROSSWEIGHT="" NETWEIGHT="" TOPROJECT="" TOCOEILINENUMBER=""
BACKREFLINENUMBER="" LINENUMBER="1" BATCH="" NUMBEROFITEMS="1">
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BACKREFLINENUMBER="" LINENUMBER="2" BATCH="" NUMBEROFITEMS="1">
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BACKREFLINENUMBER="" LINENUMBER="1" BATCH="" NUMBEROFITEMS="">
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Example 4

Physical Inventory Listing

NRC FORM 742CU (MM-YYYY) MANUFACTURE DATA COLLECTION AND INVENTORY REPORTING 40, 50, 70, 72, 74, 75, 150, Public Laws 83-703, 93-438, 95-91		U.S. DEPARTMENT OF ENERGY AND U.S. NUCLEAR REGULATORY COMMISSION		APPROVED BY OMB: NO. 3150-0058		EXPIRES: MM/DD/YYYY	
PHYSICAL INVENTORY LISTING				Estimated burden per response to comply with this mandatory collection required: 5 hours. This information is required by NRC to fulfill its safeguards responsibilities, bilateral agreements, and responsibilities as a participant in the IS/REA Safeguards Agreement. Send comments regarding burden estimate to the Records and FOIA/Privacy Services Branch (7-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to nrc-foia-comments@nrc.gov . For more information on this collection of information, see the collection of information statement at www.regulations.gov , Washington, DC 20503. If a release is used to impose an information collection does not display a currently valid OMB control number, then NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.			
1. NAME AND ADDRESS <i>Advanced Physics</i> <i>123 Anywhere Road</i> <i>Commontown</i>				2. REPORTING IDENTIFICATION SYMBOL (RIS) ABC			
CITY		STATE	ZIP CODE	INVENTORY DATE	4. LICENSE NUMBER(S)		
		<i>LA</i>	<i>11111</i>	<i>12/31/2002</i>			
5. BATCH DATA							
a. MATERIAL TYPE	b. COMPAQ CODE	c. ELEMENT WEIGHT	d. ISOTOPE WEIGHT	e. DOE PROJECT NO.	f. SUP. PROGRAM	g. MED. ISOTOPES	h. OVER. RES. CODE
E1	F02	99	3				1
E1	771	61	1				2
E1	771	45	2				3
E1	771	65	4				4
6. TOTALS				270	10	5	
To the best of my knowledge and belief, the information given above and in any attached schedules is true, complete, and correct.							
7. SIGNATURE <i>John Doe</i>				8. TITLE MC&A Representative			
				9. DATE 12/31/2002			
WARNING: FALSE STATEMENTS IN THIS CERTIFICATE MAY BE SUBJECT TO CIVIL AND/OR CRIMINAL PENALTIES. NRC REGULATIONS REQUIRE THAT SUBMISSIONS TO THE NRC BE COMPLETE AND ACCURATE IN ALL MATERIAL RESPECTS. 18 U.S.C. SECTION 1001 MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTION.							

Example 5

Physical Inventory Listing for selected IAEA facilities.

[illegible]

[illegible]

```
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    <MATERIAL PROCESSCODE="A" SEQUENCENUMBER="1" PROJECT=""
COEILINENUMBER="771" OWNER="J" KEYMEASUREPOINT="02" MEASUREBASIS="N"
OTHERMEASUREPOINT="" MEASUREMETHOD="" SCRAPPROGRAM="" ENTRYSTATUS="N"
NUMBEROFITEMS="10" BATCH="BATCH0422" LOCATION="" SITEMBA="">
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      </MATERIAL>
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COEILINENUMBER="771" OWNER="J" KEYMEASUREPOINT="02" MEASUREBASIS="N"
OTHERMEASUREPOINT="" MEASUREMETHOD="" SCRAPPROGRAM="" ENTRYSTATUS="N"
NUMBEROFITEMS="10" BATCH="BATCH0434" LOCATION="" SITEMBA="">
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          </ELEMENT>
        </MATERIAL>
        <MATERIAL PROCESSCODE="A" SEQUENCENUMBER="3" PROJECT=""
COEILINENUMBER="899" OWNER="" KEYMEASUREPOINT="" MEASUREBASIS=""
OTHERMEASUREPOINT="" MEASUREMETHOD="" SCRAPPROGRAM="" ENTRYSTATUS=""
NUMBEROFITEMS="" BATCH="" LOCATION="" SITEMBA="">
          <ELEMENT ELEMENTWEIGHT="423.00" UNIT="">
            <ISOTOPE MATERIALTYPE="20" WEIGHTPERCENT="" ISOTOPEWEIGHT="271.00" UNIT="">
              </ISOTOPE>
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      </PHYSICALINVENTORY>
```

Example 6a

Material Balance Report

DOE/NRC FORM 742U <small>(MM-YYYY) MANDATORY DATA COLLECTION AUTHORIZED BY 10 CFR 30.40, 50, 70, 72, 74, 75, 150, Public Laws 83-703, 93-438, 95-91</small>		U.S. DEPARTMENT OF ENERGY AND U.S. NUCLEAR REGULATORY COMMISSION		APPROVED BY OMB: NO. 3150-0004		EXPIRES: MM/DD/YYYY	
MATERIAL BALANCE REPORT				<small>Estimated burden per response to comply with this mandatory collection request: 5 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records and FOIA/Privacy Services Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0004), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.</small>			
1. NAME AND ADDRESS <i>Advanced Physics 123 Anywhere Road Commontown, ZA 11111</i>				2. LICENSE NUMBER(S)		3. REPORTING IDENTIFICATION SYMBOL (RIS) ABC	
				4. REPORT PERIOD (MM/DD/YYYY) FROM 01/01/2002 TO 12/31/2002		5. MATERIAL TYPE <small>(Submit separate report for each type)</small> 50	
SECTION A MATERIAL ACCOUNTABILITY							
PC	SEQ				A. ELEMENT WEIGHT	B. ISOTOPE WEIGHT	
A	1	8. BEGINNING INVENTORY -- U.S. GOVT-OWNED			0.00	0.00	
		9. BEGINNING INVENTORY -- NOT U.S. GOVT-OWNED					
		RECEIPTS					
		11. PROCUREMENT FROM DOE RIS					
A	2	FROM: DEF			11207.00	1112.00	
		13. PROCUREMENT -- FOR THE ACCOUNT OF DOE					
		14. DOD RETURNS -- USE A					
		15. DOD RETURNS -- USE B					
		16. DOD RETURNS -- OTHER USES					
		21. PRODUCTION					
		22. FROM OTHER MATERIALS a. ICT					
		b. ICT					
		c. ICT					
		30. RECEIPTS REPORTED TO DOE/NRC ON DOE/NRC 741 (not listed elsewhere)					
A	3	FROM: RIS					
		GHI			38.00	25.00	
		34. RECEIPTS -- MISC					
		37. PROCUREMENT BY OTHERS					
		38. DONATED MATERIAL -- FROM U.S. GOVT TO OTHERS					
		39. DONATED MATERIAL -- FROM OTHERS TO U.S. GOVT					
		40. TOTAL (Lines 8-39)					
		REMOVALS					
		41. EXPENDED IN SPACE PROGRAMS					
		42. SALES TO U.S. GOVT RIS TO: RIS					
		TO:					
		43. SALES TO OTHERS FOR THE ACCOUNT OF U.S. GOVT RIS					
		TO:					
		44. DOD -- USE A					
		45. DOD -- USE B					
A	4	46. DOD -- OTHER USES			2.00	1.00	
		47. EXPENDED IN U.S. GOVT TESTS					
		48. ROUTINE TESTS					
		49. SHIPPER -- RECEIVER DIFFERENCE					
		51. SHIPMENTS REPORTED TO NRC/DOE ON NRC/DOE 741 (not listed elsewhere)					
		TO: RIS					

SECTION A (Continued)		MATERIAL ACCOUNTABILITY	
PC	SEQ	A. ELEMENT WEIGHT	B. ISOTOPE WEIGHT
	54. SHIPMENTS -- MISC		
	58. DONATED MATERIAL -- TO U.S. GOVT BY OTHERS		
	59. DONATED MATERIAL -- TO OTHERS BY U.S. GOVT		
	65. ROUNDING ADJUSTMENT		
	71. DEGRADATION TO OTHER MATERIALS a. ICT		
	b. ICT		
	72. DECAY		
	73. FISSION AND TRANSMUTATION		
	74. NORMAL OPERATIONAL LOSSES/MEASURED DISCARDS		
	75. ACCIDENTAL LOSSES		
	76. APPROVED WRITE-OFFS		
	77. INVENTORY DIFFERENCE		
	80. ENDING INVENTORY -- U.S. GOVT OWNED		
A	5 81. ENDING INVENTORY -- NOT U.S. GOVT OWNED	11243	1136
	82. TOTAL (lines 41-81)		
	83. BIAS ADJUSTMENT		

SECTION B		FOREIGN OBLIGATIONS		
PC	SEQ	1. COUNTRY OF OBLIGATION	2. ELEMENT WEIGHT	3. ISOTOPE WEIGHT
		4. TOTAL WEIGHT		

SECTION C		CERTIFICATION	
To the best of my knowledge and belief, the information given above and in any attached schedules is true, complete, and correct.			
SIGNATURE (See instructions for provisions on confidentiality)	TITLE	DATE	
John Doe	MC&A Representative	12/31/2002	
WARNING: FALSE STATEMENTS IN THIS CERTIFICATE MAY BE SUBJECT TO CIVIL, AND/OR CRIMINAL PENALTIES. NRC REGULATIONS REQUIRE THAT SUBMISSIONS TO THE NRC BE COMPLETE AND ACCURATE IN ALL MATERIAL RESPECTS. 18 U.S.C. SECTION 1001 MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTION.			

Example 6b

Material Balance Report

DOE/NRC FORM 742U <small>(MM-YYYY) MANDATORY DATA COLLECTION AUTHORIZED BY 10 CFR 30, 40, 50, 70, 72, 74, 75, 150, Public Laws 83-703, 93-438, 95-91</small>		U.S. DEPARTMENT OF ENERGY AND U.S. NUCLEAR REGULATORY COMMISSION		APPROVED BY OMB: NO. 3150-0004		EXPIRES: MM/DD/YYYY	
MATERIAL BALANCE REPORT				<small>Estimated burden per response to comply with this mandatory collection request: 5 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records and FOIA/Privacy Services Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0004), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.</small>			
1. NAME AND ADDRESS <i>Advanced Physics 123 Anywhere Road Commontown, ZA 11111</i>				2. LICENSE NUMBER(S)		3. REPORTING IDENTIFICATION SYMBOL (RIS) ZZZ	
				4. REPORT PERIOD (MM/DD/YYYY) FROM 01/01/2002 TO 12/31/2002		5. MATERIAL TYPE <small>(Submit separate report for each type)</small> E2	
SECTION A MATERIAL ACCOUNTABILITY							
PC	SEQ			A. ELEMENT WEIGHT	B. ISOTOPE WEIGHT		
		8. BEGINNING INVENTORY -- U.S. GOVT-OWNED					
A	1	9. BEGINNING INVENTORY -- NOT U.S. GOVT-OWNED		800.00	150.00		
		RECEIPTS					
		11. PROCUREMENT FROM DOE RIS					
		FROM:					
		13. PROCUREMENT -- FOR THE ACCOUNT OF DOE					
		14. DOD RETURNS -- USE A					
		15. DOD RETURNS -- USE B					
		16. DOD RETURNS -- OTHER USES					
		21. PRODUCTION					
A	2	22. FROM OTHER MATERIALS a. ICT ED		74.00	14.00		
		b. ICT					
		c. ICT					
		30. RECEIPTS REPORTED TO DOE/NRC ON DOE/NRC 741 (not listed elsewhere)					
		FROM: RIS					
		34. RECEIPTS -- MISC					
		37. PROCUREMENT BY OTHERS					
		38. DONATED MATERIAL -- FROM U.S. GOVT TO OTHERS					
		39. DONATED MATERIAL -- FROM OTHERS TO U.S. GOVT					
		40. TOTAL (Lines 8-39)					
		REMOVALS					
		41. EXPENDED IN SPACE PROGRAMS					
		42. SALES TO U.S. GOVT RIS TO: RIS					
		TO:					
		43. SALES TO OTHERS FOR THE ACCOUNT OF U.S. GOVT RIS					
		TO:					
		44. DOD -- USE A					
		45. DOD -- USE B					
		46. DOD -- OTHER USES					
		47. EXPENDED IN U.S. GOVT TESTS					
		48. ROUTINE TESTS					
		49. SHIPPER -- RECEIVER DIFFERENCE					
		51. SHIPMENTS REPORTED TO NRC/DOE ON NRC/DOE 741 (not listed elsewhere)					
		TO: RIS					

SECTION A (Continued)		MATERIAL ACCOUNTABILITY	
PC	SEQ		
		54. SHIPMENTS -- MISC	A. ELEMENT WEIGHT
		58. DONATED MATERIAL -- TO U.S. GOVT BY OTHERS	B. ISOTOPE WEIGHT
		59. DONATED MATERIAL -- TO OTHERS BY U.S. GOVT	
		65. ROUNDING ADJUSTMENT	
		71. DEGRADATION TO OTHER MATERIALS a. ICT	
		b. ICT	
		72. DECAY	
		73. FISSION AND TRANSMUTATION	
		74. NORMAL OPERATIONAL LOSSES/MEASURED DISCARDS	
		75. ACCIDENTAL LOSSES	
		76. APPROVED WRITE-OFFS	
		77. INVENTORY DIFFERENCE	
		80. ENDING INVENTORY -- U.S. GOVT OWNED	
A	3	81. ENDING INVENTORY -- NOT U.S. GOVT OWNED	874
		82. TOTAL (lines 41-81)	164
		83. BIAS ADJUSTMENT	
SECTION B		FOREIGN OBLIGATIONS	
PC	SEQ	1. COUNTRY OF OBLIGATION	2. ELEMENT WEIGHT
A	4	CANADA (32)	320
			20
		4. TOTAL WEIGHT	
SECTION C		CERTIFICATION	
To the best of my knowledge and belief, the information given above and in any attached schedules is true, complete, and correct.			
SIGNATURE (See instructions for provisions on confidentiality)		TITLE	DATE
John Doe		MC&A Representative	12/31/2002
WARNING: FALSE STATEMENTS IN THIS CERTIFICATE MAY BE SUBJECT TO CIVIL, AND/OR CRIMINAL PENALTIES. NRC REGULATIONS REQUIRE THAT SUBMISSIONS TO THE NRC BE COMPLETE AND ACCURATE IN ALL MATERIAL RESPECTS. 18 U.S.C. SECTION 1001 MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTION.			

Example 7a & 7b Material Balance Report

[illegible]

```

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  <MATERIALBALANCE RIS="ABC" STARTDATE="01/01/2002" ENDDATE="12/31/2002">
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ENTRYSTATUS="N">
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        </ELEMENT>
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ENTRYSTATUS="N">
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MATERIALBALANCECATEGORY ="81">
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ENTRYSTATUS="N">
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